Table 10.1-2 (Sheet 1 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Land Use	Land use would be changed to generation and transmission of electricity, precluding the land at the VCSNS site and within the transmission corridors from being developed as residential or industrial properties.	No mitigation would be required.	Approximately 240 acres of land would be occupied on a long-term basis by the two units and associated infrastructure.
	Deposition of low concentrations of solids on SCE&G property from operation of the cooling towers.	No mitigation would be required.	No unavoidable adverse impact.
	Generation of nonradioactive and low-level radioactive waste that would require disposal in offsite permitted facilities. Generation of spent fuel requiring disposal in a geologic repository.	Implement waste minimization plan.	Landfill space would be consumed for disposal of radioactive and nonradioactive wastes from VCSNS and not available for landfilling of other wastes. Repository capacity would be consumed by disposal of spent fuel.
	Potential to impact identified cultural resources. Potential for unidentified sites within the site boundary.	Continue to have a fence barrier around Pearson Cemetery. Conduct earth-disturbing activities under existing procedures that prescribe actions to be taken in the event that significant archaeological or paleontological artifacts are encountered.	No unavoidable adverse impact.
	Permanent commitment of 17 acres of land per year for each AP1000 unit due to the fuel cycle.	No mitigation would be required.	Permanent commitment of 17 acres of land per year for each AP1000 unit.

Table 10.1-2 (Sheet 2 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Hydrologic and Water Use	Makeup water would be withdrawn from Monticello Reservoir at a rate of approximately 37,200 gpm during normal operations to 61,800 gpm during maximum operations and at a velocity of less than 0.5 foot per second. Water would be withdrawn from Monticello Reservoir to meet potable water needs.	Design and operate intake structures based on best technology available.	The consumptive loss of water is projected to be 27,800 gpm during normal operations and 31,100 gpm during maximum use operations. Withdrawal would physically affect much less than 2.92 acres (the maximum area of hydraulic influence from Unit 1) of Monticello Reservoir.
	Increase to total volume of water and chemical and other pollutants content in the NPDES permitted discharge. Increase in storm water discharge over current VCSNS volume Potential for minor spills of petroleum products.	Monitor constituent emissions as required by NPDES permit. Implement waste minization plan. Implement SCE&G's Spill Prevention, Control, and Countermeasure Plan. Conduct storm water monitoring as required by storm water permit. Continue voluntary monitoring program for water quality in Monticello Reservoir.	Discharges to surface waters within NPDES limits.
	Water consumption and discharges during fuel cycle activities.	No mitigation would be required.	Water loss from process cooling would be 210 million gallons per year for each AP1000 unit. Mine drainage discharges would be 170 million gallons per year for each AP1000 unit due to the fuel cycle.
Aquatic Ecology	Impingement of aquatic life on intake structures at Monticello Reservoir.	Use Best Technology Availability and withdrawal velocity of 0.5 foot per second or less.	Loss of small numbers (estimated to be less than that removed daily by fisherman and natural mortality rates) of abundantly occurring fish, none of which are endangered or threatened.

Table 10.1-2 (Sheet 3 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Aquatic Ecology (continued)	Discharge of heated water into Parr Reservoir. Discharge of solids and chemicals used for cooling tower water treatment into Parr Reservoir.	No mitigation would be required.	Discharge of waste heat and wastewater into Parr Reservoir affecting a small area in the immediate area of the discharge opening. Discharge velocity would result in minor bottom scour, causing local reduction in numbers of benthic organisms, but sediment is continually redeposited.
	Maintenance activities would be conducted in transmission corridors potentially at or near water bodies and wetlands and could potentially impact water quality and subsequently important species.	Implement existing procedures intended to prevent impacts to water quality and be protective of wetlands and stream crossings including restriction of heavy equipment to prevent erosion, use of approved herbicides only, and spill prevention practices when fueling or lubricating equipment.	No unavoidable adverse impacts.
Terrestrial Ecology	Maximum expected salt deposition rate from the combination of all four towers would be significantly less than the rate that is considered a threshold value for leaf damage in sensitive species.	No mitigation would be required.	No unavoidable adverse impacts.
	Noise level from cooling towers beyond 200 feet would not lead to significant incremental increases in noise level.	No mitigation would be required.	No unavoidable adverse impacts.
	Noise from low-flying aircraft conducting aerial surveys of and tree trimming in transmission corridors would temporarily disrupt animal behavior.	No mitigation would be required.	Temporary disruption of animal behavior.

Table 10.1-2 (Sheet 4 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Terrestrial Ecology (continued)	Vegetation growth in corridors would be kept in check, including eliminating woody growth, by periodic maintenance including mowing and applying herbicides.	Implement existing procedures for transmission line maintenance designed to protect flora and fauna. Train personnel in the handling of fuel and lubricants and the clean-up and reporting of any incidental spills. Have adequate spill response equipment on hand during maintenance activities in the corridors.	No unavoidable adverse impacts.
Socioeconomics	Cooling tower noise. Noise from switchyard. Intermittent noise from vehicles, diesel generators, and public address system.	Pave access roads and set speed limits for vehicle traffic to minimize noise impacts.	Low-level noise from cooling towers outside the immediate vicinity of the towers. Noise audible onsite and noise (*i.e.* public address system announcements and signals) potentially audible offsite.
	New transmission lines built in new corridors may induce shock in vehicles parked beneath lines. Transmission lines could emit corona-induced noise at very low or inaudible levels. New transmission lines could have visual impacts.	Build new transmission lines to national electrical standards to limit shock from induced currents.	No unavoidable adverse impacts.
	Roads in the vicinity would experience temporary increases in traffic at the beginning and end of the workday.	Before the start of Unit 2 operation, develop an operations management traffic plan. Stagger outage schedules to minimize traffic congestion.	Roads in the vicinity would experience temporary increases in traffic at the beginning and end of the workday.
	Air emissions would result from standby diesel generators.	No mitigation would be required.	No unavoidable adverse impacts

Table 10.1-2 (Sheet 5 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Socioeconomics (continued)	Intake and discharge structures would be visible from the reservoirs. Cooling tower plumes would be visible for some distance from VCSNS.	Minimize the visual impact of the structures through use of topography, design, materials, and color.	Intake and discharge structures would be visible from the reservoirs. Cooling tower plumes would be visible for some distance from VCSNS.
	Potential for occupational injuries and illnesses.	Implement existing SCE&G industrial safety program at Units 2 and 3.	No unavoidable adverse impacts.
	Consumption of fossil fuels during the fuel cycle process would be small relative to the power production.	No mitigation would be required.	Consumption of relatively small quantities of fossil fuels.
	Fuel cycle activities would have liquid discharges.	No mitigation would be required.	Liquid would be discharged within permit and regulatory limits.
Radiological	Small discharges of radioactive liquids and gases to the environment. Direct radiation would result in small increases at the site boundary.	Implement radiological monitoring program as required.	Small discharges of radioactive liquids and gases to the environment Direct radiation would result in small increases at the site boundary.
	Potential doses to the public from operations of Units 2 and 3 within regulatory limits of 40 CFR 190 Potential doses to the public and transportation workers from the transport of unirradiated fuel, spent fuel, and radiological waste from operations and decommissioning. Potential doses to the public from the mining and processing of uranium for the fuel cycle.	Conduct radiological monitoring program as required. Conduct meteorological monitoring.	Potential doses to the public that are well below regulatory limits.
	Potential doses to biota from liquid and gaseous effluents would be much less than the 100 mrad/day.	Conduct radiological monitoring program as required.	Potential doses to biota from liquid and gaseous effluents would be much less than the 100 mrad/day.

Table 10.1-2 (Sheet 6 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Radiological (continued)	Maximum annual occupational dose for Units 2 and 3 is expected to be similar to or less than that for Unit 1, which averaged 51 person-rem for the 2003 to 2005 period. Occupational doses to decommissioning workers would be comparable to those associated with refueling and plant maintenance.	Conduct radiological monitoring program as required.	Workers would receive small occupational dose.
	Expected annual generation of less than 17 cubic feet of liquid mixed waste and less than 7.5 cubic feet of solid mixed waste for each AP1000 unit.	Implement existing Unit 1 waste minimization practices at Units 2 and 3.	Radioactive waste would be generated.
	Expected annual generation of low-level radioactive waste of 5,760 cubic feet for each AP1000 unit. Volume to be shipped offsite for disposal reduced to 1,960 cubic feet per unit through onsite processing.	Implement existing Unit 1 waste minimization practices at Units 2 and 3.	Radioactive waste would be generated.
Atmospheric and Meteorological	Plumes from Units 2 and 3 cooling towers.	No mitigation would be required.	No unavoidable adverse impacts.
	Increase in air emissions from VCSNS primarily from auxiliary systems such as emergency diesel generators.	No mitigation would be required. All emissions would be within regulatory limits.	No unavoidable adverse impacts.
	Relatively small quantities of air pollutants would be result from the fuel cycle.	No mitigation would be required.	Relatively small quantities of air pollutants would be result from the fuel cycle and emissions would be within permit limits.

Table 10.1-2 (Sheet 7 of 7)
Operations-Related Unavoidable Adverse Environmental Impacts

Category	Adverse Impact	Mitigation Measure	Unavoidable Adverse Environmental Impact
Environmental Justice	SCE&G did not identify any location-dependent disproportionately high and adverse impacts affecting minority and low-income populations. No operations-related disproportionately high and adverse health or environmental effects impacting minority or low-income populations' health or welfare were found.	No mitigation would be required.	No unavoidable adverse impacts.

NPDES = National Pollutant Discharge Elimination System
SCDHEC = South Carolina Department of Environmental Control
SHPO = State Historic Preservation Office